

REMARKS

Claims 1, 4-11, 18 and 21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Daines et al. in view of Joung et al. This rejection is respectfully traversed for the following reasons.

In the application of a rejection under 35 U.S.C. § 103, it is incumbent upon the Examiner to factually support a conclusion of obviousness. As stated in *Graham v. John Deere Co.* 383 U.S. 1, 13, 148 U.S.P.Q. 459, 465 (1966), obviousness under 35 U.S.C. § 103 must be determined by considering (1) the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims in issue; and (3) resolving the level of ordinary skill in the pertinent art.

As demonstrated below, the Examiner has failed to ascertain the differences between the prior art and the claims in issue.

In particular, **claim 1** recites a computer system that comprises:

- a local bus,
- a host processor coupled to the local bus,
- a network interface for providing an interface between the local bus and a network medium, and
- a memory coupled to the local bus, the memory having receive buffers allocated for receiving data from the network medium.

The network interface includes an automatic flow control mechanism for automatically controlling a flow of data from the network medium based on availability of the receive buffers.

In a first flow control mode initiated when a flow control mode signal is at a first logic level, the automatic flow control mechanism is configured to respond to a shortage of the receive

buffers by automatically requesting a remote transmitter coupled to the network medium to suspend data transmission until a predetermined number of the receive buffers is available.

In a second flow control mode initiated when the flow control mode signal is at a second logic level, the automatic flow control mechanism is configured to respond to a shortage of the receive buffers by automatically requesting the remote transmitter coupled to the network medium to suspend data transmission for a predetermined time.

The Examiner admits that Daines does not disclose the claimed second flow control mode initiated when the flow control mode signal is at a second logic level.

Joung is relied upon for disclosing a flow control mechanism configured to respond to a shortage of the receive buffers by automatically requesting the remote transmitter coupled to the network medium to suspend data transmission for a predetermined time.

However, neither Daines nor Joung teaches or suggests the claimed **flow control mode signal** having a first logic level, at which the automatic flow control mechanism is configured to respond to a shortage of the receive buffers by automatically requesting a remote transmitter coupled to the network medium to suspend data transmission until a predetermined number of the receive buffers is available, and having a second logic level, at which the automatic flow control mechanism is configured to respond to a shortage of the receive buffers by automatically requesting the remote transmitter coupled to the network medium to suspend data transmission for a predetermined time.

Accordingly, a combination of the references is not sufficient to suggest controlling the flow control mode in the manner required in claim 1.

The test for obviousness is what the combined teachings of the references would have suggested to those having ordinary skill in the art. *Cable Electric Products, Inc. v. Genmark, Inc.*,

770 F.2d 1015, 226 USPQ 881 (Fed. Cir. 1985). In determining whether a case of *prima facie* obviousness exists, it is necessary to ascertain whether the prior art teachings appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification.

In re Lalu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984).

As demonstrated above, the combined teachings of the references are not sufficient to one skilled in the art to suggest **controlling a mode of operation** of a flow control mechanism in the manner required in claim 1.

Moreover, the Examiner should recognize that the fact that the prior art *could* be modified so as to result in the combination defined by the claims would not have made the modification obvious unless the prior art suggests the desirability of the modification. *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986). In the absence of such a prior art suggestion for modification of the references, the basis of the rejection is no more than inappropriate hindsight reconstruction using applicant's claims as a guide. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967).

Applicant respectfully submits that the Examiner has improperly applied hindsight as a basis for a holding of obviousness. In particular, the modification of the references suggested by the Examiner is not based on a prior art suggestion. Instead, the Examiner's considerations are based on the present invention. It is noted that only the present invention suggests **a procedure for controlling a mode of operation of a flow control mechanism** so as to respond to a shortage of the receive buffers by automatically requesting a remote transmitter coupled to the network medium to suspend data transmission until a predetermined number of the receive buffers is available in a first mode of operation, and to respond to a shortage of the receive

buffers by automatically requesting the remote transmitter coupled to the network medium to suspend data transmission for a predetermined time in a second mode of operation.

Claims 12-17, 19 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Daines et al.

Independent claim 12 recites a network interface device for providing an interface between a data network and a computer system, the network interface device comprising:

- a descriptor management unit for managing receive descriptors pointing to receive buffers allocated to receive data from the network medium, and

- an automatic flow control mechanism for automatically performing flow control in accordance with the number of available receive descriptors pointing to the receive buffers available for receiving data from the network medium.

Independent claim 19 recites a method of automatic flow control in a network interface between a data network and a computer system. The method comprises the steps of:

- monitoring the number of receive descriptors pointing to buffers in the computer system available for receiving data from the network, and

- automatically requesting a remote station in the data network to suspend data transmission when the number of receive descriptors falls below a first preprogrammed threshold level.

The Examiner appears to admit that Daines does not disclose the claimed descriptor management unit, and the claimed automatic flow control mechanism for automatically performing flow control in accordance with the number of available receive descriptors, as claim 12 requires.

Also, the Examiner recognizes that Daines does not disclose the claimed steps of monitoring the number of receive descriptors, and automatically requesting a remote station in the data network to suspend data transmission when the number of receive descriptors falls below a first preprogrammed threshold level, as claim 19 recites.

The Examiner relies upon inherency for disclosing the claimed arrangement and method. However, the Examiner should be aware that inherency requires certainty, not speculation. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986); *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983); *In re Oelrich*, 666 F.2d 578, 212 USPQ 323 (CCPA 1981); *In re Wilding*, 535 F.2d 631, 190 USPQ 59 (CCPA 1976). To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probability or possibilities. *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999).

The Examiner provided no factual basis upon which to conclude that Daines necessarily includes the claimed descriptor management unit **for managing receive descriptors pointing to receive buffers allocated to receive data from the network medium**, and the automatic flow control mechanism for automatically performing flow control **in accordance with the number of available receive descriptors pointing to the available receive buffers**. Instead, the Examiner relies on a dictionary's definition of descriptors.

However, one skilled in the art of data communications would understand that the Daines flow control system does not necessarily involve managing receive descriptors pointing to receive buffers allocated to receive data from the network medium, and automatically

performing flow control in accordance with the number of available receive descriptors pointing to the available receive buffers, as claim 12 requires.

Also, the Daines flow control system does not necessarily involve monitoring the number of receive descriptors, and automatically requesting a remote station in the data network to suspend data transmission when the number of receive descriptors falls below a first preprogrammed threshold level, as claim 19 requires.

Accordingly, the Examiner's position of inherency is improper.

It is noted that the Examiner also improperly relies on inherency in connection with the subject matter of claims 4-11 dependent from claim 1. The Examiner has failed to show that the subject matter of these claims is **necessarily** present in the references.

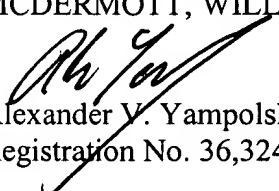
Hence, the Examiner has failed to factually support his conclusion of obviousness. The applicants, therefore, respectfully submit that the rejection of claims 1, 4-11, 18 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Daines et al. in view of Joung et al., and the rejection of claims 12-17, 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Daines et al. are untenable and should be withdrawn.

In view of the foregoing, and in summary, claims 1 and 4-21 are considered to be in condition for allowance. Favorable reconsideration of this application is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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